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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,444	04/12/2004	Eric Beran	305502.01	1429
69316 7590 04/12/2011 MICROSOFT CORPORATION ONE MICROSOFT WAY REDMOND, WA 98052				
EXAMINER NUNEZ, JORDANY				
ART UNIT 2171		PAPER NUMBER		
NOTIFICATION DATE 04/12/2011		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/822,444

Applicant(s)

BERAN ET AL.

Examiner

JORDANY NUNEZ

Art Unit

2171

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-13, 16 and 32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-13, 16 and 32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-945)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date Attached.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/18/2011 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3, 5-8, 10-13, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (US5627979, hereinafter Chang) in view of Nori et al. (US6108664, hereinafter Nori).

As to claim 1:

Chang shows a method of constructing and displaying a representation of an object (e.g., a table) having plurality of properties, the method comprising:

identifying at least a first property group (e.g., class) including a first set of the plurality of properties (e.g., attributes) (fig. 25, el. 2510) and a second property group including a second set of the plurality of properties (fig. 25, el. 2530), the first and second sets being different from one another (column 16, lines 23-29) (e.g., a user may want to map classes in an inheritance hierarchy into one table, or may even want to map multiple classes even though the classes do not have any relationship with each other);

retrieving data corresponding to a property name and value for each of the properties belonging to the first property group (column 8, lines 32-35; col. 11, el. 49-56) (e.g., retrieving objects from the data store, with each object including attributes, and values associated with each attributes; each row on a table is an object);

and displaying on a user interface a representation of the object that includes a display of the first property group (fig. 25).

Chang fails to specifically show: specifying to a representation engine the first property group to represent the object; and displaying on a user interface a representation of the object not including the second property group.

In the same field of invention, Nori teaches: object views for relational data. Nori further teaches: identifying at least a first property group (e.g., a first object type) including a first set of the plurality of properties (e.g., first attributes) and a second property group (e.g., a second object type) including a second set of the plurality of properties (e.g., second attributes), the first and second sets being different from one another (column 8, lines 17-30) (e.g., object types define and group attributes);

specifying to a representation engine the first property group to represent an object (figs. 3E, 3F; column 9, lines 33-42) (e.g., specifying a first group of columns of a table to represent a view, including a previously defined object type);

retrieving data corresponding to a property name and value for each of the properties belonging to the first property group (figs. 3F);

and displaying on a user interface a representation of the object that includes a display of the first property group and not the second property group (column 9, lines 42-52) (e.g., each row in the object view represents an object as defined in a view definition; if a second object type is not included in the view definition, then that second object type will not be included in a display of the view).

Thus, it would have been obvious to one of ordinary skill in the art, having the teachings of Chang and Nori at the time that the invention was made, to have combined the teachings of Nori with the method as taught by Chang.

One would have been motivated to make such combination because a way to present data from one or more tables as a set of objects that reside in the database would have been obtained and desired, as expressly taught by Nori (column 4, lines 14-18).

As to claim 2, Nori shows:

The method of claim 1, wherein the step of displaying comprises visually displaying the name (e.g., OLD, NAME, STATE) and value for each property in the first property group (fig. 3f).

As to claim 3, Nori shows:

The method of claim 2, wherein the step of displaying further comprises displaying the names of properties belonging to the first property group adjacent values of those properties (fig. 3f).

As to claim 5, Nori shows:

The method of claim 1, wherein the object (e.g., a view) has a parent object (e.g., multiple tables that are joined to produce the view) that has a specified property group (e.g., has a specific object type including several table columns) wherein displaying a representation of the object comprises displaying the object using the first property groups and the specified property group of the parent object (e.g., a view definition may use object types of a parent table and may also create new object types for the view) (column 9, lines 9-19; col. 9, l. 34-42).

As to claim 6, Chang shows:

The method of claim 1, and further comprising:

identifying any other object (e.g., parent class) that the object (e.g., table) references within a property (e.g., attribute) of the first property group (e.g., class), the other object having a default property group (e.g., attributes of the parent class) wherein at least one object inheritance hierarchy exists between the object and the other identified objects (e.g., parental attributes may be implemented by a child class, or they may be overridden by child attributes that are more specific), and wherein each property group is unique to a particular object inheritance hierarchy (e.g., the attributes of the Dog class are unique and different from the attributes of the Cat class, and both classes inherit from the class animal)(fig. 8; column 16, lines 18-29) (e.g., classes may have inheritance relationships; a user may want to map all attributes that are inherited into one table).

As to claim 7, Chang shows:

The method of claim 6, wherein the object (e.g., dog) is a specialization of a second object (e.g., animal), and wherein the object inherits the property groups associated with the second object (fig. 8; column 16, lines 18-29).

As to claim 8, Chang shows:

The method of claim 6, wherein for each property group, properties belonging to the property group (e.g., class) include at least one property (e.g., attribute) of the object (e.g., table) and one or more properties (e.g., attributes) of only one other object (e.g., only one other table) (column 16, lines 18-29) (e.g., the user has control over which classes are associated with which tables, and therefore it would be obvious for an attribute of a first class to be as to associated with one table, and another attribute of the first class with just one other table).

As to claim 10, Chang shows:

The method of claim 1, wherein specifying the first property group associated with the object further comprises identifying the first property group as a default property group associated with the object (column 16, lines 2-16).

As to claim 11:

A method of constructing a representation of an object (e.g., table) having property plurality of properties (e.g., column), the method comprising:

assigning properties (e.g., columns) of the objects (e.g., table) in a data base to first and second property groups (e.g., to first and second classes) (fig. 22, 23, 25, for example), each property group (e.g., class) including at least one property (e.g., attributes of a class, which correspond to columns of a table) of the object (e.g., table) that is different from properties in other property groups (e.g., the attributes of the Dog class are different from the attributes of the Cat class)(fig. 8; column 16, lines 18-29);

storing the property groups in the database (column 8, lines 20-35);

and retrieving property names and values for each property in the first property group (column 8, lines 32-35; col. 11, el. 49-56) (e.g., retrieving objects from the data store, with each object including attributes, and values associated with each attributes; each row on a table is an object);

and displaying the object (fig. 25).

In the same field of invention, Nori teaches: object views for relational data. Nori further teaches: for the objects in the database, specifying that only the first property groups is to be used in representing the object (column 8, lines 17-30);

and retrieving property names and values for each property in the first property group (figs. 3F);

and displaying the object by displaying the names and values of the properties in the first property group for the object and not the properties in the second property group (column 9, lines 42-52) (e.g., each row in the object view represents an object as defined in a view definition; if a second object type is not included in the view definition, then that second object type will not be included in a display of the view).

Thus, it would have been obvious to one of ordinary skill in the art, having the teachings of Chang and Nori at the time that the invention was made, to have combined the teachings of Nori with the method as taught by Chang.

One would have been motivated to make such combination because a way to present data from one or more tables as a set of objects that reside in the database would have been obtained and desired, as expressly taught by Nori (column 4, lines 14-18).

As to claim 12, Chang shows:

The method of claim 11, wherein object inheritance hierarchies exist between some of a plurality of objects in the database (fig. 8, object inheritance exist between Animal and Cat and Dog), wherein the step of assigning properties to first and second property groups further comprises associating property groups with objects such that each property group is unique to a particular object inheritance hierarchy (column 16, lines 18-29) (e.g., when associating class attributes with table columns, a first and second class comprises a class that is unique to a particular hierarchy).

As to claim 13, Chang shows:

The method of claim 11, wherein the step of assigning properties to first and second property groups further comprises associating property groups with objects in the database such that at least one of the property groups is associated with two objects such that properties of the two objects belong to the property group (fig. 19; one class may be associated with two tables).

As to claim 16, Nori shows:

The method of claim 11, wherein the step of displaying the object further comprises displaying the names of properties belonging to the first property group adjacent the values of those properties (fig. 3F, column names are adjacent to row values)

Claims 4, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang in view of Nori, further in view of Bennett et al. (US5615367).

As to claim 4:

Chang and Nori shows a method substantially as claimed, as specified above.

Chang and Nori fails to specifically show: wherein displaying names of properties belonging to the first property group further comprises displaying a name of first property group adjacent the names of the properties belonging to the first property group and adjacent the values of those properties.

In the same field of invention, Bennett teaches: linking tables for improved relational DB modeling. Bennett further teaches: wherein displaying names of properties belonging to the first property group further comprises displaying a name of first property group adjacent the names of the properties belonging to the first property group and adjacent the values of those properties (figs. 3E, 3F, 3G) (e.g., the name of a table or view is displayed adjacent to the name of the table columns and rows).

Thus, it would have been obvious to one of ordinary skill in the art, having the teachings of Chang, Nori and Bennett at the time that the invention was made, to have combined the teachings of Bennett with the method as taught by Chang and Nori.

One would have been motivated to make such combination because a way to provide users tools for automating data modeling would have been obtained and desired, as expressly taught by Bennett (column 3, lines 42-49).

As to claim 32:

Chang shows a computer implemented method of displaying a document object using a computer with a processor, comprising:

identifying, with the processor, at least a first property group (fig. 25, el. 2510) and a second property group (fig. 25, el. 2530) for the sales document object (column 16, lines 23-29),

retrieving, with the representation engine, property names and values for properties in the given one of the first and second property groups (column 8, lines 32-35; col. 11, el. 49-56) (e.g., retrieving

objects from the data store, with each object including attributes, and values associated with each attributes; each row on a table is an object);

and displaying on the user interface, a representation of the document object (fig. 25).

Chang fails to specifically show: the document object being related to sales; the first property group including at least customer properties related to a customer and the second property group including at least administrative properties related to administration of the sales document object; specifying, to a representation engine implemented by the processor, that the sales document object is to be represented on a user interface using a given one of the first and second property groups; and displaying on the user interface, a representation of the sales document object, the representation having displayed properties not including the properties in the other of the first and second property groups.

In the same field of invention, Nori teaches: object views for relational data. Nori further teaches: identifying at least a first property group (e.g., a first object type) including a first set of the plurality of properties (e.g., first attributes) and a second property group (e.g., a second object type) including a second set of the plurality of properties (e.g., second attributes), the first and second sets being different from one another (column 8, lines 17-30) (e.g., object types define and group attributes);

specifying to a representation engine the first property group to represent an object (figs. 3E, 3F; column 9, lines 33-42) (e.g., specifying a first group of columns of a table to represent a view, including a previously defined object type);

retrieving data corresponding to a property name and value for each of the properties belonging to the first property group (figs. 3F);

and displaying on a user interface a representation of the object that includes a display of the first property group and not the second property group (column 9, lines 42-52) (e.g., each row in the object view represents an object as defined in a view definition; if a second object type is not included in the view definition, then that second object type will not be included in a display of the view).

In the same field of invention, Bennett teaches: linking tables for improved relational DB modeling. Bennett further teaches: the document object being related to sales (e.g., customer.DB, Orders.DB)(fig 3E, 3F, 3G); the first property group including at least customer properties related to a

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customer (e.g., customer.DB) and the second property group including at least administrative properties related to administration of the sales (e.g., orders.DB) document object (fig 3E, 3F, 3G).

Thus, it would have been obvious to one of ordinary skill in the art, having the teachings of Chang, Nori and Bennett at the time that the invention was made, to have combined the teachings of Bennett with the method as taught by Chang and Nori.

One would have been motivated to make such combination because a way to provide users tools for automating data modeling would have been obtained and desired, as expressly taught by Bennett (column 3, lines 42-49).

It is noted that any citation to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. In re Heck, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting In re Lemelson, 397 F.2d 1006, 1009, 158 USPQ 275, 277 (CCPA 1968)).

Response to Arguments

Applicant's arguments with respect to claims above have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Otter et al. [U.S. 7475333]

Kroenke et al. [U.S. 5809297]

Atkins et al. [U.S. 6240422]

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordany Núñez whose telephone number is (571)272-2753. The examiner can normally be reached on Monday Through Thursday 9am-7:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chat Do can be reached on (571)272-3721. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jordany Núñez/
Examiner, Art Unit 2171
4/7/2011